

Occupational Therapy: Cost-Effective Solutions for Changing Health System Needs

Kate Rexe, Brenda McGibbon Lammi and Claudia von Zweck

Abstract

Evidence shows occupational therapy interventions are cost-effective in treating or preventing injury and improving health outcomes in areas such as falls prevention, musculoskeletal injury, stroke rehabilitation, early intervention in developmental disabilities, respiratory rehabilitation and home care. Additional research indicates opportunities for occupational therapy to play an increased role in the management of health outcomes in complex and chronic diseases, pain management, non-pharmaceutical mental health interventions, dementia, end-of-life or palliative care and home care. This article aligns the discussion of health system transformation with literature identifying the cost-effectiveness of occupational therapy in Canada.

Occupational therapists are highly educated health professionals who have specialized training in physical, cognitive and affective components of human performance (Canadian Institute for Health Information 2011). In other words, occupational therapists enable people to do what they need and want to do in all aspects of their lives. Yet the benefits of occupational therapy are not well known, and occupational therapists are often not acknowledged for their expertise and knowledge. There is a growing body of evidence to indicate occupational therapists can offer wide-reaching interventions that are cost-effective and improve health outcomes (Clark et al. 2001; Graff et al. 2007; Hay et al. 2002; Institute for Work and Health 2007; Jongbloed and Wendland 2002; MacDonald 2006; Schene et al. 2007;

Zastrow et al. 2010). Evidence shows that occupational therapy offers solutions not only to challenges related to health and well-being, but also to health system change.

Despite the range of expertise offered by occupational therapists, one of the biggest challenges facing the profession is that occupational therapists are underused and not working to their full scope of practice. For example, occupational therapists often carry large caseloads, resulting in circumscribed client consultations and a restricted number of visits. This approach to client care results in a fractured approach to intervention, rather than providing solutions to a range of challenges experienced in daily living. In fact, it can be argued that if occupational therapy were presented as an intervention to support health system transformation, maximizing the role of occupational therapy in Canada would offer new opportunities to achieve value for money in the health system. The goal of this article is to present the economic argument supporting the role and full scope of practice offered by occupational therapists across the continuum of care, and throughout a patient's lifetime. Using economic evidence and concrete examples, the potential of occupational therapy to provide effective solutions to areas of rising costs in healthcare, as well to improve patient outcomes, will be demonstrated. Finally, recommendations for how to align occupational therapy solutions with system gaps and challenges in order to improve client care and system performance will be provided.

Aligning Occupational Therapy with Health System Goals

One basic factor driving the discussion of health system transfor-

mation in Canada is the fact that health spending is rising faster than the rate of economic growth. In July 2012, the Council of the Federation's Health Care Innovation Working Group released its first report, *From Innovation to Action*. The goal of this report, and the objective of the working group as a whole, is to "significantly improve patient care and overall system performance." The report highlights achievements across the country to demonstrate effective examples of health system innovation in the areas of clinical practice guidelines, team-based health-care delivery models and health human resources management initiatives. Whether recommendations for change are based on the health of aging Canadians, chronic disease management and clinical practice guidelines, a transition to team-based models of care or creating a national pharmaceutical strategy, there is growing evidence to indicate that occupational therapy interventions can play an important role in health system transformation because they provide practical solutions to a range of problems, from simple to complex.

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In 2006, the Canadian Association of Occupational Therapists (CAOT) commissioned a review of high-quality economic evaluations and peer-reviewed literature pertaining to services offered by occupational therapists to gain an understanding of the economic effectiveness of occupational therapy services. In this review, the author identified 20 primary economic evaluation articles related to occupational therapists performing an intervention in a home or community care setting, in primary health teams or related to wait times (MacDonald 2006). An additional 26 economic evaluation articles of health interventions were identified in which occupational therapists were not the primary practitioner involved in a project but the intervention fell under the areas of competency or scope of practice of occupational therapists (e.g., acquired brain injury, stroke rehabilitation, orthopedics, geriatric assessment including dementia, developmental disabilities, mental health, pain management and return to work, driving assessment and rehabilitation, falls prevention and sensory motor integration). The conclusion of this study identified a range of cost-effective interventions, with falls prevention and early discharge for stroke patients being the most studied topics and presenting the firmest conclusions with regard to economic effectiveness (MacDonald 2006).

Since this literature review was completed, additional research reports and publications have added to the scope and body of evidence regarding the economic evaluation of inter-

ventions falling within the scope of practice of occupational therapy. For this article, an additional 15 articles were reviewed relating to cost-effectiveness and occupational therapy, in the areas of therapeutic interventions in mental health and depression, responsive and preventive occupational therapy for aging adults, occupational therapy in end-of-life or palliative care and occupational and other related therapies in the insurance industry. In general, the conclusions of all the articles reviewed suggest a strong foundation of evidence indicating positive health outcomes in occupational therapy intervention, with good value from an economic perspective (Combe et al. 2007; Constant et al. 2011; Graff et al. 2007; Hay et al. 2002; Health Council of Canada 2012; Institute for Work and Health 2007; Park Lala and Kinsella 2011; Schene et al. 2007).

Health System Transformation

In 2011, the Canadian Health Services Research Foundation commissioned a report on cost drivers in the health sector and health system efficiency. The report argues that "understanding the factors that underlie the rise in healthcare expenditures in Canada (known technically as cost drivers) is essential to a productive debate on healthcare sustainability" (Constant et al. 2011: i). In this research synthesis, the authors identify that decisions in expenditure growth are driven by population growth, population aging, income growth, inflation and other enrichment factors (i.e., advances in technology and medical science). However, the conclusion suggests that if the public health system is to improve on value for money, or cost-effectiveness, the discussion must extend to the areas "where most funds are allocated (hospitals and physicians) or where growth significantly exceeds revenue growth (capital, drug and public health)" (Constant et al. 2011: 21).

This research synthesis is rich in economic data and indicators related to healthcare expenditure trends in the provinces and territories, comparing them with international outcomes. Based on this report and the examination of other evidence related to cost-effectiveness of occupational therapy interventions, there is a clear opportunity to put forth recommendations for alternatives that maximize the skills and professional resources in Canada. In fact, based on the primary indicators of cost drivers in the system presented by Constant and colleagues, the diversity of specialization and expertise of occupational therapists offer a ready-made solution to the complex challenges affecting the health system today.

With an increased interest in the economics of healthcare, many studies find that occupational therapy offers solutions that are both cost-effective and respond to other pressures on the health system (Alzheimer Society of Canada 2010; Denis et al. 2011; Graff et al. 2007; Health Council of Canada 2012; Institute for Work and Health 2007; MacDonald 2006). Based on evidence from a range of sources, the following points

present opportunities for occupational therapists in health system reform.

Shortening the Length of Hospital Stays

Evidence shows that occupational therapy can respond to the demand for beds or space in hospitals and long-term care facilities by providing services for patients to move out of hospital and back home after a stroke, fall, injury or the onset of mental health challenges, or at the end of life (Constant et al. 2011; MacDonald 2006). One successful program to reduce the length of hospital stays in Canada for patients recovering from stroke includes the Stroke Early Supported Discharge Program, provided by Alberta Health Services (Kennedy 2012, July 30). In this example, occupational therapists play an integral role by providing “all the tools needed to work towards restoring the abilities, confidence and independence of stroke survivors who experience a significant disability that challenges independent living” (Kennedy 2012). Programs such as this can provide much-needed in-home care, save money, free up in hospital space for new patients and potentially save in capital investment and infrastructure for in-patient hospital care.

Increased Effectiveness of Community-Based Services

A collaborative and proactive approach to health prevention and healthcare management allows clients to get the care they need before it reaches the stage of acute care. Occupational therapists have expertise and areas of specialization that can play a greater role in the management of complex diseases, pain management and disability. There is also emerging evidence to show that occupational therapists play an important role in primary care, particularly in the involvement with inter-professional primary health teams. In Toronto, the Integrated Client Care Program offered by a community care access centre allows seniors at risk of hospitalization to stay in their own homes as long as possible with strong support from healthcare professionals and community service providers (“Toronto Home-Care Program Keeps Patients out of Hospital” 2012). In this example, occupational therapists work with clients and caregivers in the home to manage complex health conditions that limit mobility and the ability to manage self-care. Broadening the professional expertise of health teams and incorporating the best professionals to manage and treat illness or injury along the continuum of care will allow for a more functional and effective health services system that acts to promote health and well-being at all stages of life, rather than treating illness at points of acute care or crisis.

Reducing Costs of Pharmaceutical Intervention

Drug costs are one of the fastest-growing areas in Canada’s health system, second only to capital costs (Constant et al. 2011). Studies have examined non-pharmaceutical therapeutic

interventions such as occupational therapy and found evidence of improved ability to treat, particularly in areas such as depression and mental health, pain management and stroke rehabilitation (Combe et al. 2006; Dooley and Hinojosa 2004; Schene et al. 2007). For example, occupational therapy can support individuals with rheumatoid arthritis by identifying tailored exercises and strategies to reduce pressure and fatigue on joints and to improve strength and motion. This, in turn, can reduce the reliance on pain medication and support clients’ participation in activities that bring meaning and satisfaction to their life.

End-of-Life Care

Research has shown that aging does not cost the system; dying does. The last two years of life are the most costly to the health system (Constant et al. 2011). Emerging evidence identifies how occupational therapy can help to support patients and caregivers with end-of-life care. With both formal options in palliative care and informal options through family caregivers in the home, occupational therapy helps patients plan for their care needs and provides options for dying with dignity, with reduced health and pharmaceutical interventions (CAOT 2011; Park Lala and Kinsella 2011).

Solutions to Support Changing Needs

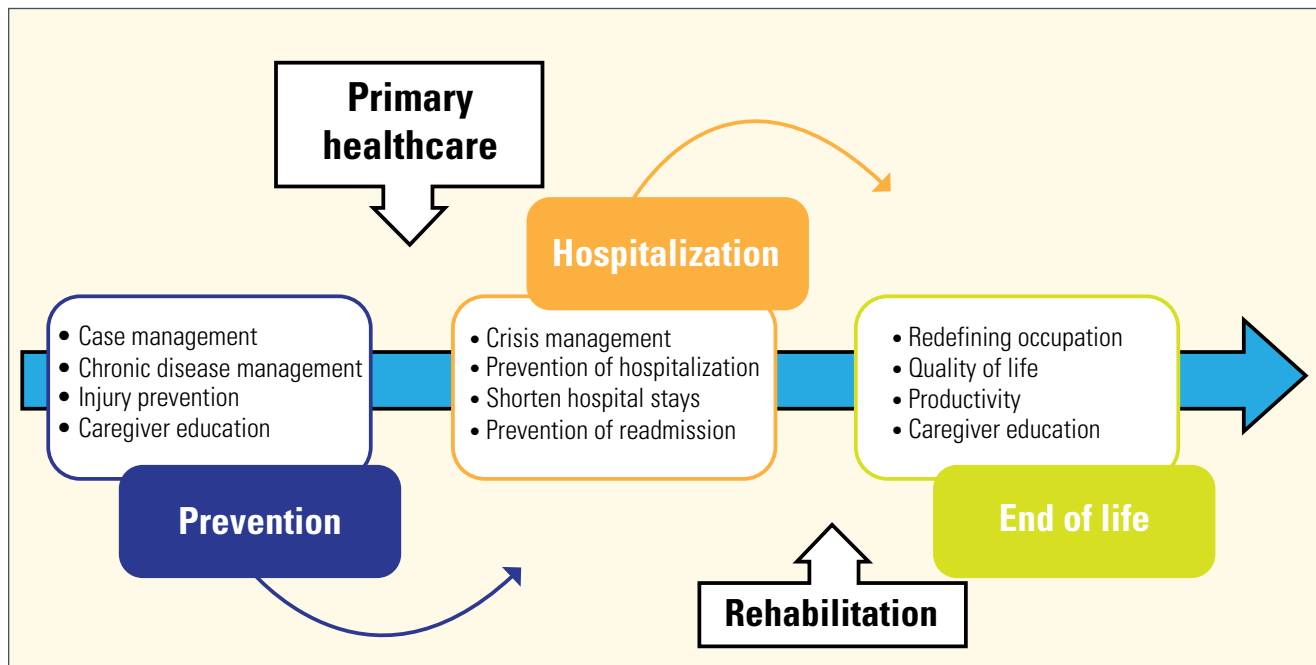
With a wide range of skills and a diversity of expertise, occupational therapists are ideal health professionals to intervene in many areas where complex care creates barriers to effective care. Figure 1 offers a visual diagram – representing the continuum of care and the opportunities for effective intervention – that maximizes the scope of practice of occupational therapists.

There are clear, cost-effective opportunities for occupational therapists to use their expertise and full scope of practice to improve client care as a health promotion expert or primary care practitioner in the following areas:

- Case management
- Chronic disease management
- Injury prevention
- Caregiver education
- Intervening at the point of health crisis or hospitalization to prevent hospitalizations or shorten hospital stays
- Providing community or caregiver support to prevent re-admission
- Rehabilitation
- Help clients redefine or better understand changing occupation at the end-of-life to improve productivity and quality of life

There is an increasing desire in health services research and policy to address the future of healthcare in Canada and identify the key issues affecting the delivery of comprehensive and quality

FIGURE 1.
Occupational intervention along the continuum of care



care. The issue most often examined is arguably the concern with rising costs and the sustainability of publicly funded healthcare. A decade ago, these issues were discussed in the context of market competition, efficiency, effectiveness and increasing the private delivery of health services and healthcare. While these issues have not gone away, the discussion has shifted to managing rising costs in light of a monumental demographic shift in the age of Canadians.

According to Statistics Canada (2011), the proportion of seniors in Canada is projected to rise from approximately 14% to 23–25% of the population by 2036. Not only will this generation be leaving the workforce in record numbers in the coming years (and no longer contributing to taxes at the same rate), these individuals can expect to have an increase in health problems and their use of health services. To put this in the context of healthcare, in 2009, 25% of seniors reported at least four chronic health conditions and accompanying poor health, compared with 6% of adults aged 45–64 years (Statistics Canada 2011). In the next few years, there will be significantly more seniors, and these seniors will likely be affected by similar health problems to those we see today. The result of this shift will be a much greater number of individuals and illnesses that need to be cared for and managed. What this means for Canada’s healthcare systems is that we need to prepare and have the most appropriate services in place to respond to the changing needs of the population.

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The examples of home care or community-based services are opportunities or areas in need of transformation, where solutions exist and can be readily implemented if the funding is made available. As identified by the Health Council of Canada, one of the challenges in the home care sector is that “increasing levels of need are not necessarily matched by increasing levels of home care services” (Health Council of Canada 2012: 14). The data analyzed for that study also showed that pain, depression and falls were common problems faced by clients using home care services, all of which can be addressed through interventions with the appropriate health professionals. Unfortunately, the study found a low involvement of occupational therapists and physiotherapists across all five regions in which the analysis was conducted, despite the fact that the majority of challenges faced by seniors were related to both basic and broader activities of daily living (Health Council of Canada 2012).

With the aging population and corresponding growth in cases of chronic diseases such as diabetes, dementia, arthritis,

heart disease and stroke, there will be increased opportunities for primary care to be delivered in new ways. For example, team-based care will be more important than ever to serve the changing population needs, and occupational therapy is proven to be an important profession represented in team-based models of care. Occupational therapy as a profession is responsive to all the changes in the health services system, whether this involves preparation for changing demographics, through case management of complex diseases and diagnoses, or preparation for amendments in the management of health services and the funding of services in the public and private sectors. Regardless of whether services are delivered through a public institution or community-based setting, occupational therapy is flexible to respond to the needs of the population and provides excellent remedies to challenges for people throughout the life cycle (CAOT 2011).

Summary and Recommended Actions

It is inevitable that as the public health system comes under increasing financial pressure, there will need to be a shift in priorities and changes to the delivery of care. To summarize the evidence put forth in this article, there are opportunities to increase the use of occupational therapy interventions to not only meet the current gaps and challenges in Canadian healthcare but provide solutions for changing health service needs as well. For instance, using specific economic challenges put forth by Constant et al. (2011), there are four primary cost drivers in the health system today that could benefit from cost-effective occupational therapy interventions: hospitals, physicians, pharmaceuticals and public health.

“Occupational therapy is flexible to respond to the needs of the population and provides excellent remedies to challenges for people throughout the life cycle.”

The suggestion of interventions related to cost drivers in the health system is just one method of identifying priorities for health system change. Regardless of the method of identifying priorities or guiding principles of change, occupational therapy can emerge as an essential profession in Canada's health system. In fact, research indicates that occupational therapy is an important intervention in return-to-work programs; injury prevention at work, school, home, sport or play; improving chronic disease and pain management; supporting unpaid caregivers by providing valuable solutions to improve independence and balancing the stress of providing care; and providing successful rehabilitation for stroke, respiratory ailments and other forms of traumatic injury

(Clarke et al. 2001; Combe et al. 2007; Glascoe et al. 1997; Graff 2007; Health Council of Canada 2012; Institute for Work and Health 2007; Langhorne and Legg 2003; MacDonald 2006; Park Lala and Kinsella 2011; Ramos et al. 2004; Robert Dooley and Hinojosa 2004; Schene et al. 2007).

Conclusion

Practical solutions to the healthcare funding crisis need to be timely, cost-effective and managed at a systems level. Decisions also need to be supported by evidence, and it is clear there is a great deal of evidence from different areas of expertise and based on various professional scopes of practice, which makes prioritizing and decision-making difficult. Nevertheless, there are clear opportunities to transform healthcare based on evidence of economic effectiveness and positive health outcomes. Occupational therapy interventions align with many of the priorities and principles identified in discussions of health system transformation. Occupational therapy provides solutions that go beyond the traditional medical model. Working toward health services delivery through both inter-professional models of practice and the recognition of occupational therapy's value as an autonomous health profession can open up a world of possibility for a health system that requires change. **HQ**

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